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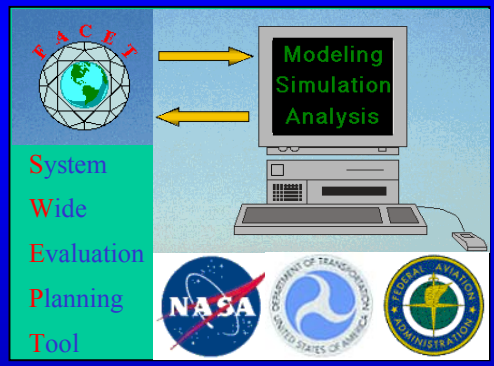
Cambridge, MA

En Route Modeling Workshop
Free Flight Office

SWEPT

System-Wide Evaluation and Planning Tool (SWEPT) Introduction



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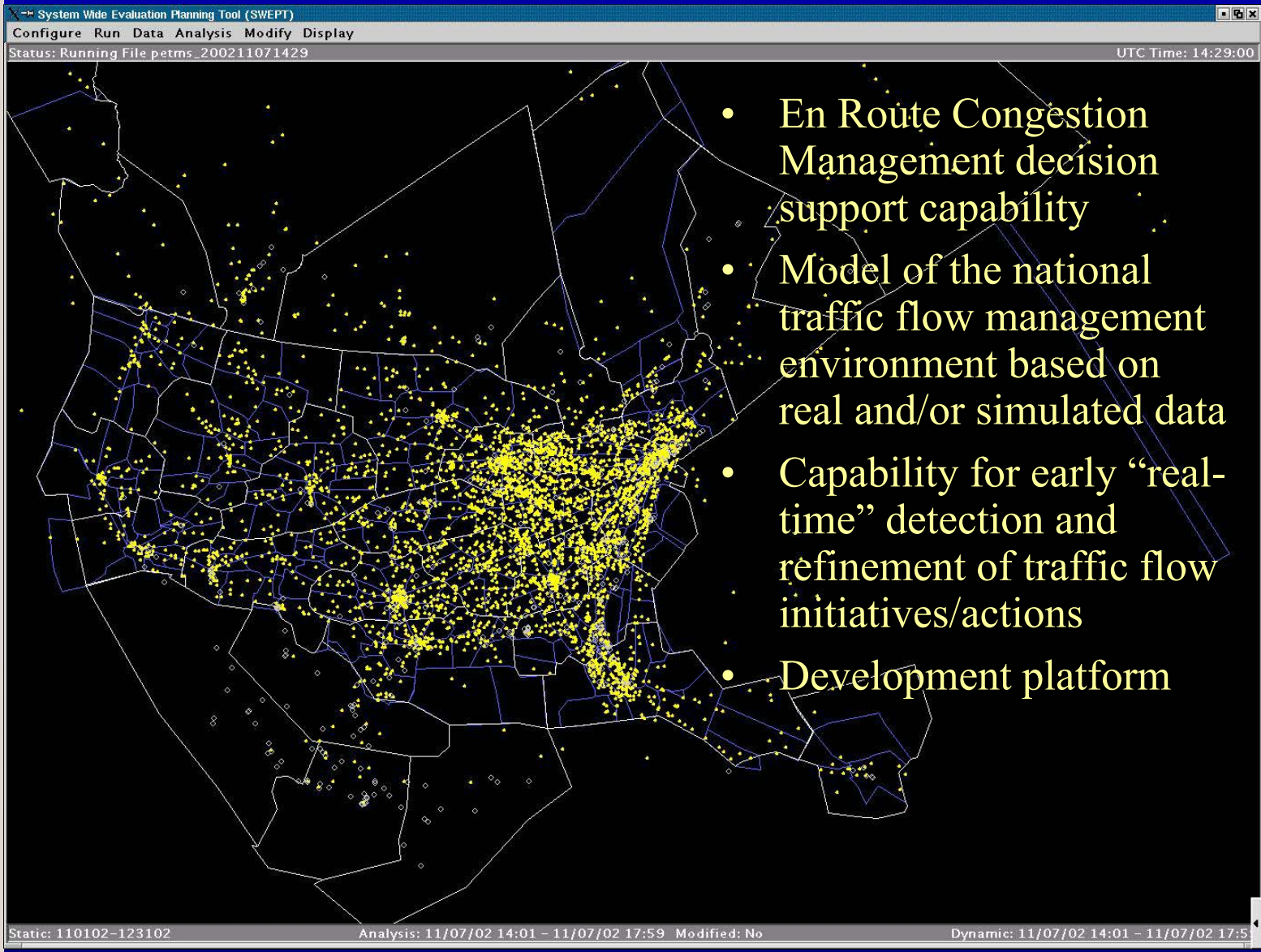
What is SWEPT?



- En Route Congestion Management decision support capability
- Model of the national traffic flow management environment based on real and/or simulated data
- Capability for early "real-time" detection and refinement of traffic flow initiatives/actions
- Development platform

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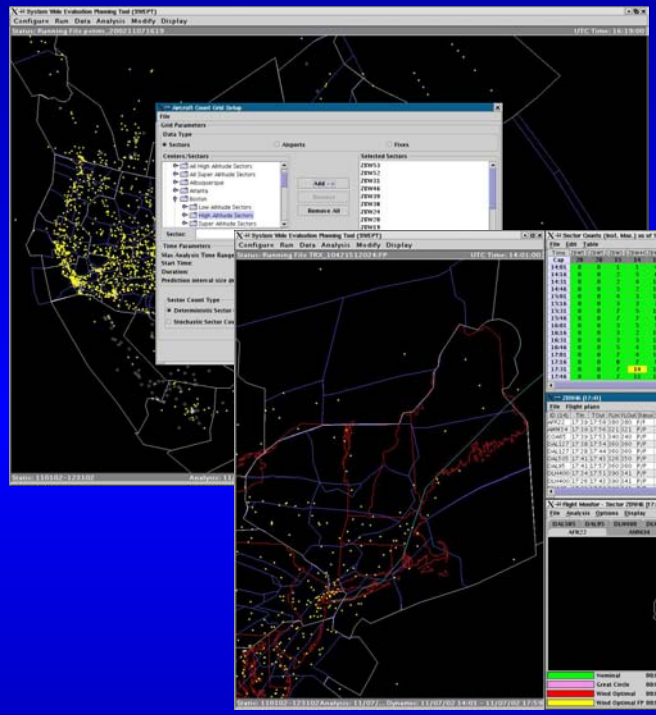
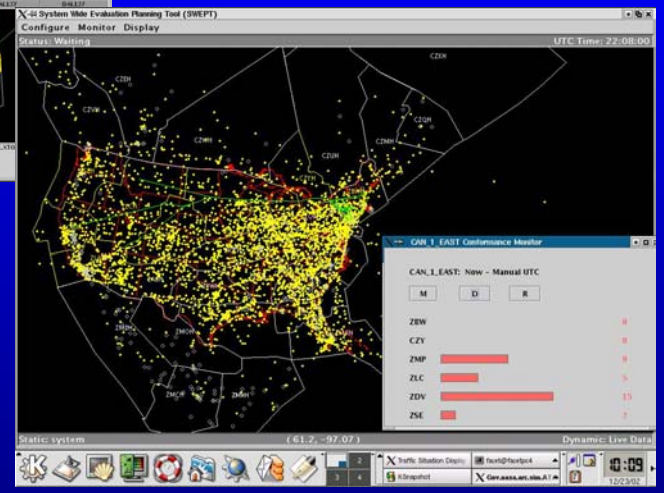
SWEPT Functionality

SWEPT



- Evaluation of traffic flow scenarios
- Operational planning with online and offline analysis capability



- Conformance to planned traffic flow management initiatives – specifically real-time reroute conformance monitoring

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Why Reroute Conformance Monitoring?

SWEPT

- Allows FAA Specialists to monitor the strategic plan of operation developed in collaboration with airlines and specialists on the Strategic Planning Team (SPT) telcon
- The earlier non-conformance is detected, the earlier corrective action can be taken and thus less disruption to the plan
- Less disruption to the plan, usually means less delay for airlines and less congestion for specialists
- Rerouting in action

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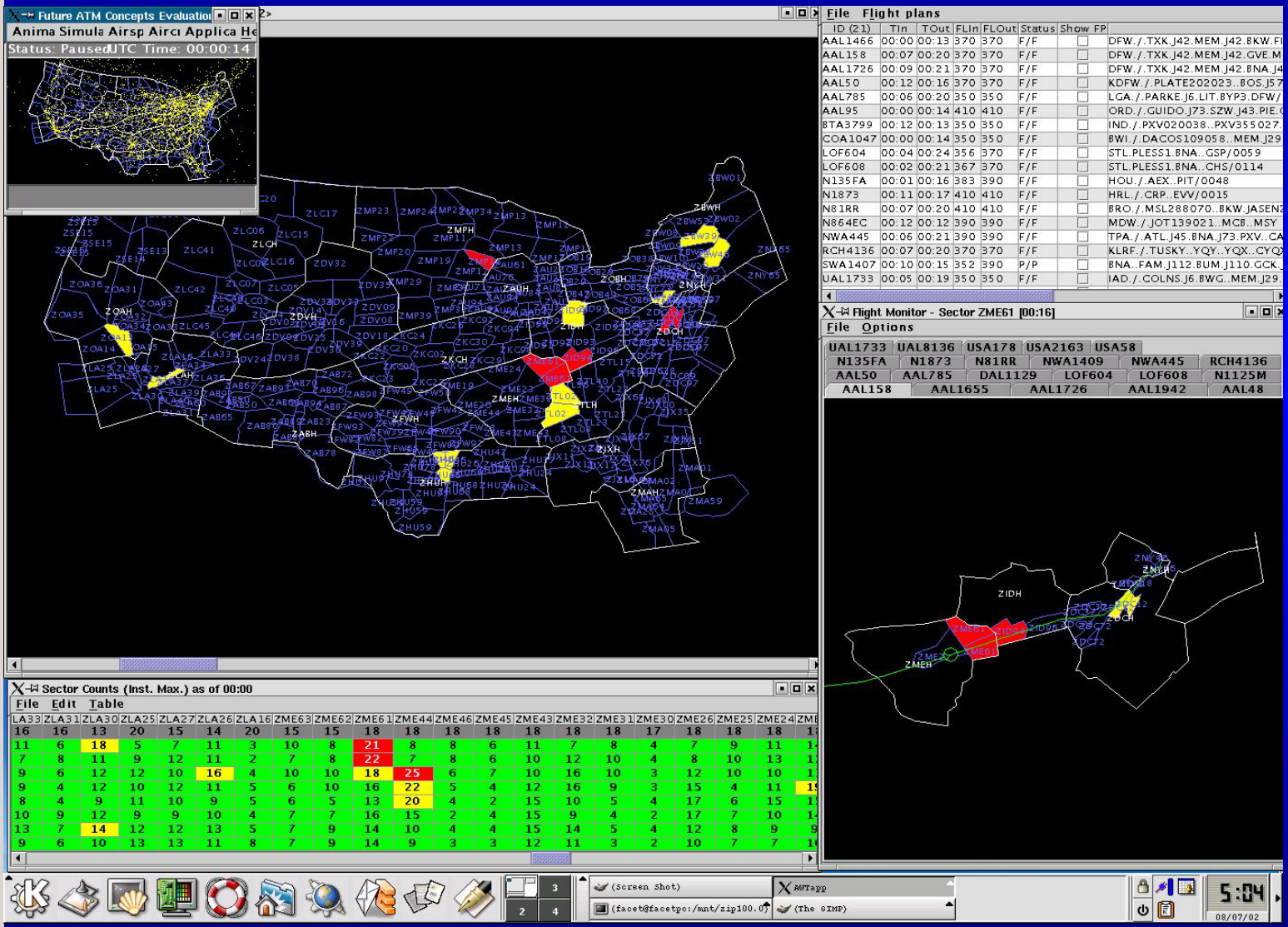
FACET Baseline



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Transition of FACET Into SWEPT

- Received FACET software baseline
- Introduced ATCSCC to SWEPT/FACET
- Delivered SWEPT/FACET demonstration platforms
- Adopted conformance monitoring idea/concept
- Developed new user-oriented mental model of operating and associated graphical user interface (GUI)

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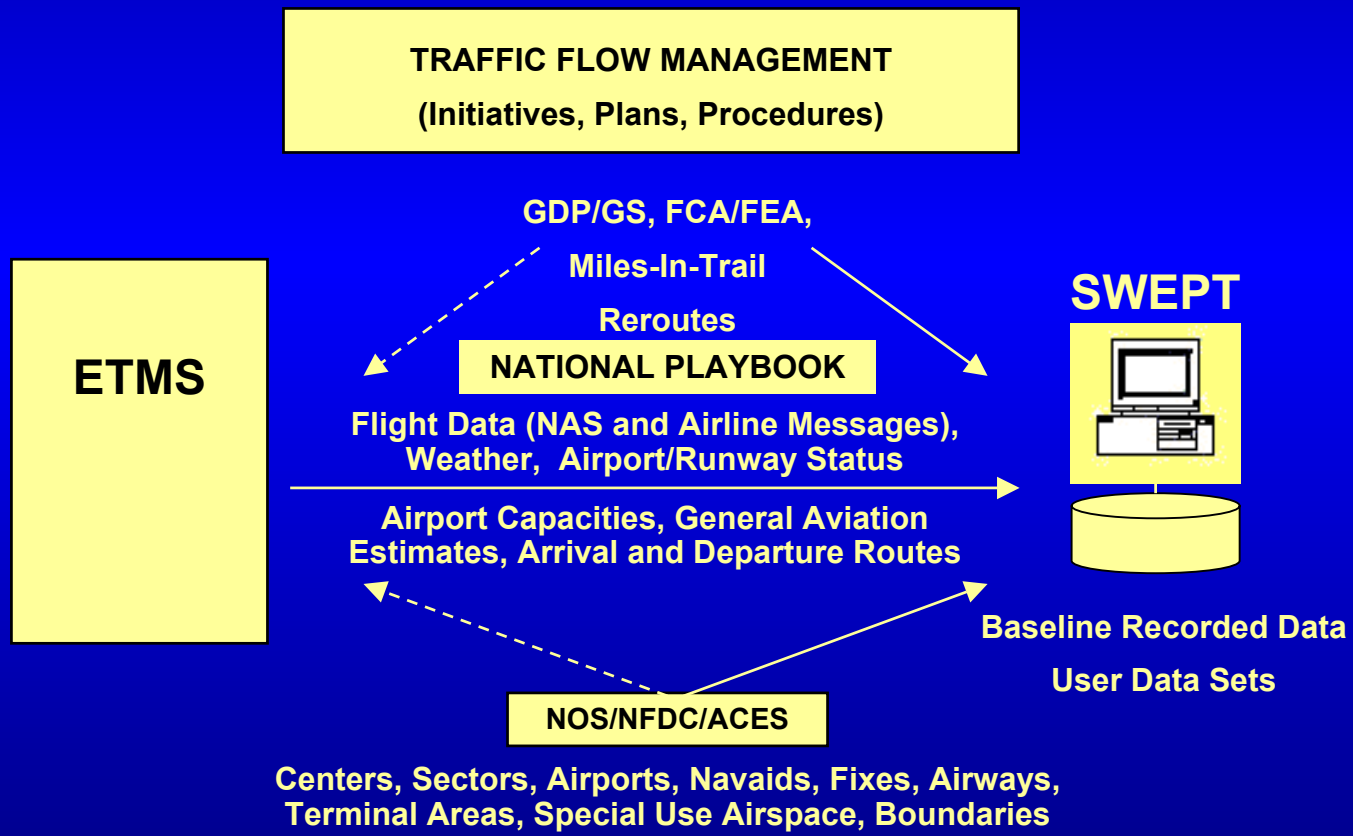
Transition of FACET Into SWEPT

- Implemented data interface from ETMS to SWEPT
- Implemented data interface from National Playbook to SWEPT



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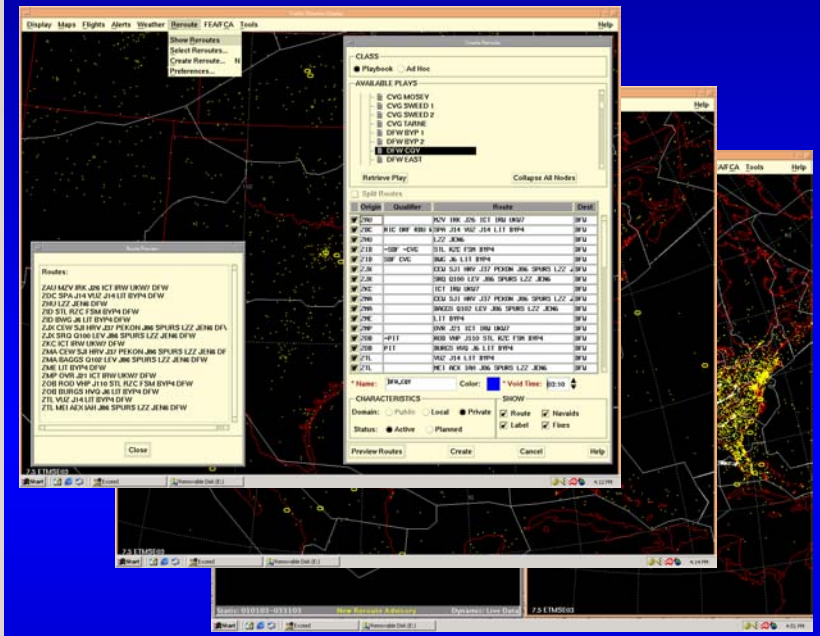
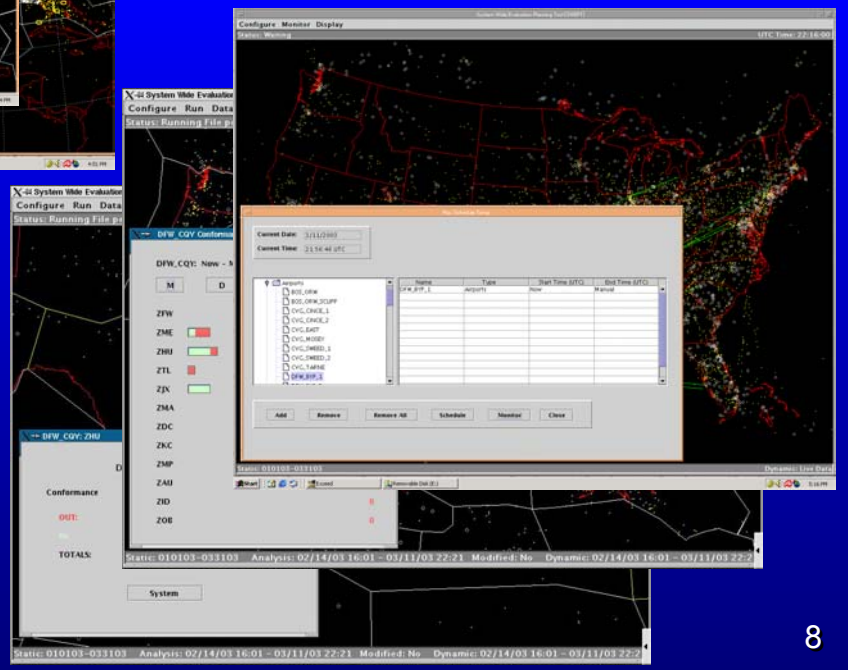
Transition of FACET Into SWEPT

SWEPT



- Developed initial reroute conformance monitoring functionality
- Conducted informal demonstration for air traffic
- Performed demonstration of SWEPT in live mode

- Received feedback that ATCSCC is interested in using the SWEPT platform to develop and test reroute conformance monitoring algorithms



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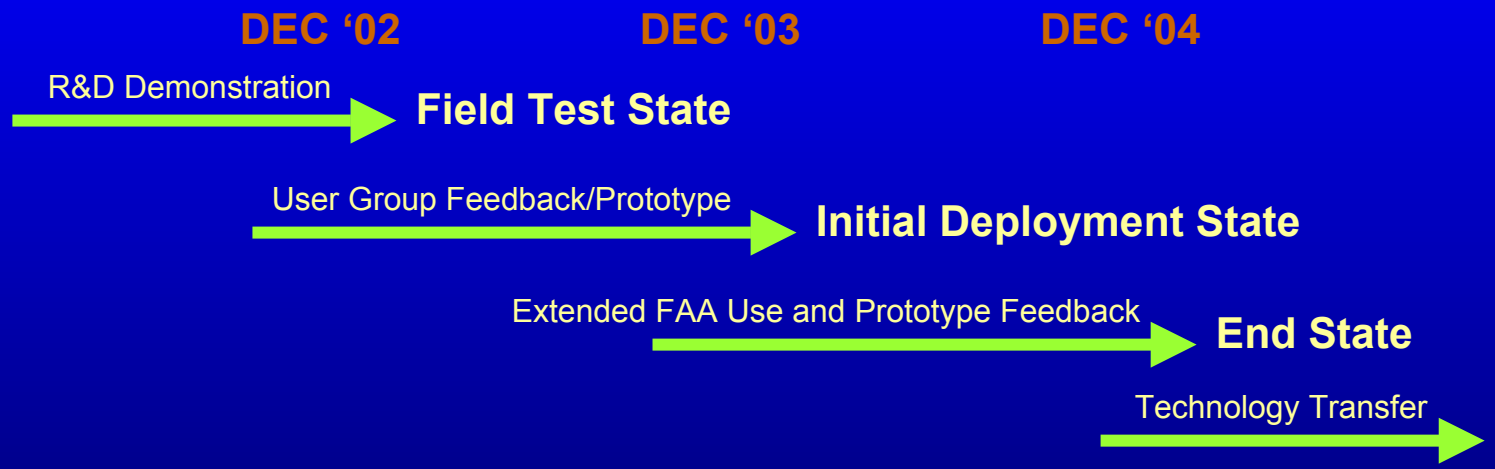
Project Purpose

SWEPT

- Develop an initial "field test" version of SWEPT capable of demonstration by December 2002
- Demonstrate and collect feedback on the SWEPT concept from FAA



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Next Steps

SWEPT

- Establish reroute conformance monitoring user group
- Select/invite members
- Facilitate and initial meeting and demonstration
- Provide alternative reroute conformance algorithms
- Modify/implement selected algorithm
- Develop concept of operations

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Next Steps

SWEPT

- Collect feedback/fine-tune algorithm and user displays
- Structure SWEPT implementation for smooth transition
- Deliver SWEPT prototype with initial Reroute Conformance Monitoring capability
- Collect feedback from an extended FAA user community

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SWEPT

QUESTIONS